- MLCS delivers the transmission to the customer's premises at the DS1 rate. It is the customers responsibility to channelize at their premises. Exchange network access, OPXs, Tie-Lines and data services at 2.4, 4.8, 9.6, 19.2, 56 and 64 Kbps are available on MLCS.

- Requires Line Code and Framing Format to be specified by the customer.

- Any SynchroNet® circuit terminating in MegaLink Channel Service must also terminate in a SynchroNet node. There will be a node termination charge for the Local Channel riding the MegaLink® and for the other Local Channel provisioned.

- Automatic Protection Switching (APS) for a DS1 interface provides automatic DS1 channel switching to a backup DS1 channel should the primary DS1 fail. This feature requires purchase of an additional MegaLink service channel for each backup channel required. Rates, charges and availability must be negotiated on an individual case basis. This feature may not be available for DS1s using Clear Channel line code (B8ZS).

The MegaLink components provided by BellSouth are listed below:

- Digital local channel (in 1/2 mile increments - rounded to the next 1/2 mile)
- Flat Rate local channel
- Interoffice channels (where applicable)
  - in three mileage band options (0-8, 9-25 or over 25 miles)
    - fixed and
    - per airline mile or fraction thereof (rounded up to full miles)

- Clear Channel Capability (per MegaLink; charged only on subsequent orders)
  - Superframe format (SF)
  - Extended Superframe (ESF)

NOTE: In most cases, clear channel capability can be optioned on a MegaLink at initial installation for no additional charge. However, if an existing MegaLink needs to be changed to SF or ESF, a one time charge will apply to cover the cost of the conversion translations.

In addition to the above components, MegaLink carries with it its own:

- Service Establishment Charge,

- Service Charge, and,
- Premises Visit Charge.

For the Channelized portion:

- Basic system capacity, of 24 voice channels to 672 voice channels
- Feature activations
  - Analog voice service, per channel/feature activated for FX, FCO, OPX, WATS, trunk, DID, ESSX Station line, MultiServ station line, voice PL or tie-line
  - Analog data service, per channel/feature activated
  - Digital data service, per channel/feature activated for 2.4, 4.8, 9.6, 19.2, 56 or 64 Kbps data rates
  - Broadband Exchange Line FA

- Rate elements from other tariff sections for the DS0 services riding the MegaLink.
- Line coding and Framing Formats Specific to the 1.544 Mbps transport
  - AMI & D4 - SF
  - AMI & ESF
  - Clear Channel Capability (B8ZS) & D4 - SF
  - Clear Channel Capability (B8ZS) & ESF

The MegaLink components provided by the customer are listed below:

Channel Service Unit (CSU):

At the customer location, a CSU provides these basic functions:

- Incoming signal regeneration
- Bipolar violation monitoring and removal
- Ones density monitoring and correction
- Keep alive signal generation
- Loopback, testing and diagnostic access

Network Interface

A network interface is required at the customer's premises to interface the MegaLink local channel with the customer's Network Channel Terminating Equipment (NCTE). Since the NCTE and the CSU are considered customer premises equipment it is critical that the CLEC identify the location of the customer's network interface. This information can impact the location of the last

repeater in the circuit. Also, the location of the network interface is dictated by the minimum point of penetration rules.

Signaling is very important. AMI/B8ZS and ESF/SF are areas where most troubles occur on installation

MegaLink Channel Service can be provided in the following pricing arrangements:

- Month-to-Month
- 24-48 month contract plan
- 49-72 month contract plan
- 73-96 month contract plan

The rates provided under contract plans are not subject to increase by BellSouth until the contract period expires. There is, however, a termination liability if the service is terminated or disconnected prior to the end of the contract.

The first element to include when pricing a MegaLink Channel Service design is the 1.544 Mbps facility itself. This is priced out of the MegaLink tariff.

Rate elements found in the MegaLink Channel Service tariff are divided into two major categories:

- Basic system capacity
- Feature activation

Basic System Capacity

The basic system capacity rate element refers to the incremental number of D4 channel bank card slots reserved for the customer to house their feature activation cards. This is also known as the channelization charge (or charge for providing the D4 channel banks).

The basic system capacity rate element is available only under contract for variable rate periods.

The MegaLink Channel Service design should be established based on individual customer factors, (i.e., anticipated system growth/decrease, time frames, contractual period, and of course, total costs to the customer). The customer may channelize all or part of the MLCS package.

Feature activation

The feature activation rate element is available under contract for variable rate periods, as well as month-to-month service.

NOTE: All MegaLink Channel Services in a customer's package must be channelized in a single central office (i.e., package cannot be split between central offices).

In addition to rates and charges found in the MLCS tariff, GSST section A3 rates and charges for Network Access Service are also applicable to any MLCS channels used for network access. This will allow exchange service without a loop charge in the same manner as employed for MultiServ® service lines.

- (In Alabama, Kentucky, Louisiana, Mississippi and Tennessee, network access service is provided for channels within MLCS on a volume usage measured rate).

Another factor to include in pricing a MLCS system is that individual channels within a MLCS package may be connected with services offered in other sections of the Private Line tariff or the GSST. In those cases, non-MLCS links (single channel service components) are subject to the rates and charges in the respective tariff sections.

Tariff References/Price List References

MegaLink Channel Service is available for intraLATA service in all BellSouth service areas. The MegaLink Channel Service tariff is located in section B7 of the state-specific Private Line Service Tariff.

Installation Intervals

Normal Installation Intervals	**NO**
Project Coordination Required	**YES**

Service Inquiry and Ordering Guidelines

To order MegaLink Channel Service the CLEC should submit the following forms to the CLEC Account Team:

Local Service Request (LSR)
End User Information Form

Both forms are available in the Resale Ordering Guide.

Service Ordering Charges

Service ordering connection charges apply to new service as well as changes, additions and moves of equipment. The initial service establishment charge includes engineering design, common centralized testing and coordination, and establishing and processing specific data in connection with a customer's request.

Premises visit charges also apply for each digital local channel provided, i.e., for each MegaLink service DS1 provided.

MegaLink Channel Service requests will always require the use of a service inquiry for any given customer and BellSouth location(s).

Information that will need to be provided:

- Customer name, address, telephone number
- Customer contact name, contact telephone number
- Independent company name (ICO - if any)
- Purchase order number
- CKL1 address, serving central office, distance to the central office
- CKL2 address, serving central office, distance to the central office
- Channel layout, circuit ID per channel, circuit type, number range, PIC, MLHG and other individual circuit specifics
- B8ZS or AMI, SF or ESF
- BellSouth provided inside wiring?
- Jack type (usually RJ48)

For all initial or subsequent order activity on MegaLink Channel Service, contact your BellSouth CLEC Account Team.

Version 1 March, 1997

MegaLink® Plus Service
CLEC Information Package

This information is provided solely as a convenient reference for BellSouth's Customers. While BellSouth believes information contained herein to be consistent with applicable Tariffs, the Tariffs shall prevail in any instance in which an

Service Description

MegaLink Plus service is a premium DS1 service that is distinguished by its high degree of reliability and survivability. The infrastructure to support this service is fiber based and utilizes a self-healing architecture to provide local loop facility protection. The goal of this service is to limit the interruption of service due to a single point loop facility failure. A sixty second service guarantee is inherent with this service offering. Service Installation Guarantees will also be part of this offering where facilities exist.

MegaLink Plus service is a service for transmission of digital signals only and uses only digital transmission facilities. It is a fiber-based high capacity network service providing a 1.544 Mbps transport link with high performance and reliability parameters.

MegaLink Plus service is not deployed ubiquitously, but on a limited basis to customer locations already served by facilities which are fiber based and provide loop diversity between the working and protect fibers. Loop diversity for this service can be achieved by either structural or route diversity. Some minor variations from the strict interpretation of structural diversity may be allowed, as discussed in Section 2.4 of the Private Line Service Tariff, but structural diversity must exist between the working and protect fibers for essentially their entire length. Any customer wishing to subscribe to MegaLink Plus service in a serving area where facilities do not exist can obtain this service via special construction as set forth in Section B5 of the Private Line Service Tariff. The architectures identified for this service will use either SONET-based technology or asynchronous fiber systems which will support the service requirements for MegaLink Plus Service. Nodal redundancy is not offered as part of this service.

MegaLink Plus service utilizes a self-healing diverse fiber-based local channel (loop) transport link between a customer designated premises and its serving wire center. MegaLink Plus service is furnished on a link (partial) basis for connection at the normal serving wire center to another MegaLink Plus service, a MultiServ® service (may not be available from all serving wire centers), MegaLink channel service, FlexServ® service, LightGate® service, or SMARTRing® service. Connectivity between MegaLink Plus service and these services may be provided via a MegaLink service Interoffice Channel between central offices.

MegaLink Plus is offered on a month to month basis and under contract options. Non-recurring charges are not assessed when this service is provided under a contract option. Non-recurring charges will apply for month to month options. The minimum service period is one month.

The customer premises Network Interface is a DS1 Connector (RJ48C, RJ48X, RJ48M or RJ48H) for Customer DS1 Channel Interfaces. A DSX1 crossconnect panel is an acceptable alternative.

There are no switch requirements for DS1 transport.

The following is a series of architectures recommended to support the requirements for this service. This service provides for fiber based self-healing local loop facilities. If the service has a local loop on both ends, then both loops must meet the requirements.

It is acceptable for the service to utilize a fiber hub in the loop which represents a single point of failure, if the hub is housed in a substantial, well protected concrete structure (CEV or hut). Aside from this exception, the fibers must be structurally diverse from the serving wire center manhole to the manhole/ CEV at the customer premise.

Separate entrance facilities into the customer premise building from the manhole/ CEV at the customer premise are not required. However, if the facility between the manhole/ CEV and the building is not diverse, then it must be on property owned by the building owner, i.e., it cannot run down the public highway on a pole line, nor can it be buried cable running down the roads of an office park.

For the initial service offering, there are no requirements to provide fiber based or self-healing architecture for interoffice facilities. The initial deployments of MegaLink Plus service will be limited to Architectures 1 through 3. These architectures will be monitored and updated as necessary.

Architectural Alternative #1

This architectural alternative is targeted at meeting stand-alone local channel demand. A stand-alone local channel connects the customer's premises to its normal serving wire center. A portion of the special access DS1s falls into the stand-alone local channel category to interconnect with other BellSouth provided services such as SMARTPath℠ Service, SMARTRing Service, or FlexServ Service. Each existing facility serving arrangement must be verified to ensure it meets the local loop facility protection criteria, that is, separate cable and physically separate outside plant structures.

This arrangement utilizes a traditional point-to-point fiber system with fiber optic terminals at the customer location and the serving central office. The fiber facilities for the working path of this system are physically diverse from the protection path. This facility arrangement is an embedded architecture. Most of

the embedded fiber optic terminals are asynchronous (generally 90MB or 180MB). All new fiber optic terminals will be SONET, operating predominantly at the OC-1, OC-3 and OC-12 rates for this application.

Architectural Alternative #2

This serving arrangement is a basic SONET ring consisting of several nodes and interconnecting with other facilities at a single point. Nodes on this ring include the serving central office, possibly a second central office, and several customer locations. These nodes are connected with physically diversely routed fiber creating a closed loop. These rings will be OC-3/OC-3+/OC-12 SONET technology, with an add/drop multiplexer (ADM), configured in a ring mode, deployed at each node. Like alternative # 1, this architecture is targeted at services that originate at a customer's premises and terminate at its serving central office. It may also be used for services that originate at a customer's premises and terminate at another customer premises, if those premises both happen to be located on the same ring.

Architectural Alternative #3

Demand that goes beyond its serving wire center can be provisioned using this arrangement. The endpoints are generally customer premises. This architecture consists of loop facilities meeting the requirements as listed for alternative # 1 or alternative # 2. If the two customer premises are not served by the same wire center, then their local loops will be connected by interoffice facilities. For the initial service offering, these interoffice facilities are not required to meet the diversity requirements of the MegaLink Plus local loop, although in many cases interoffice facilities already meet these guidelines. MegaLink Plus does not have a requirement for dual node, i.e., dual ring interworking. Single node arrangements should be readily available under normal circumstances.

With SONET transport systems, specific software is required as part of the network element to support certain ring functions.

Performance objectives for MegaLink Plus service between the customer's location and the serving wire center are as follows:

a. Meet or exceed 99.98 percent Circuit Availability.
b. Meet or exceed 99.95 percent Error Free Seconds.
c. Meet or exceed .010 Severely Errored Seconds.

The objectives apply except when a customer's equipment and/or cabling is disconnected and/or inoperative, or when a MegaLink service Interoffice Channel is used in conjunction with a MegaLink Plus service Local Channel.

The MegaLink Plus service Local Channel provides for the connection between a customer's designated premises to their serving wire center.

There are no special interoffice facility requirements for MegaLink Plus. Facilities meeting the requirements for regular MegaLink are acceptable. Diversity only applies to the first Central Office manhole.

Tariff References/Price List References

MegaLink Plus service is available for intraLATA service in all BellSouth service areas. The MegaLink Plus service tariff is located in section B7 of the state-specific Private Line Service Tariff.

Installation Intervals

Normal Installation Intervals	**NO**
Project Coordination Required	**YES**

Service Inquiry and Ordering Guidelines

To order MegaLink Plus service the CLEC should submit the following forms to the CLEC Account Team:

Local Service Request (LSR)
End User Information Form

Both forms are available in the Resale Ordering Guide.

MegaLink Plus service requests will always require a service inquiry.

For all initial or subsequent order activity on MegaLink Plus service, contact your BellSouth CLEC Account Team.

MEGALINK® SERVICE/HIGH CAPACITY DS1

General Description

MegaLink® service/High Capacity DS1 digital services are central office (CO)-based services which allow customers to create dedicated digital networks. They offer rate stability, digital technology, and increased networking capability. Services can be mixed to provide a unique network for each customer.

- MegaLink service is BellSouth's name for intraLATA (Private Line) DS1 service
- Equivalent to T1 or High Capacity Digital Service (HICAP)
- 1.544 megabits per second (Mbps) transmission speed
- Full Duplex Digital Data
- IntraLATA Private Line (MegaLink service) and Special Access FCC No. 1 (High Capacity DS1)
- Private Line (Special Services MegaLink) and Special Access (High Capacity DS1)
- Requires channel service unit (CSU) to terminate the T1 span, regenerate the signal, and provide loopback
- High Service Quality - uses regenerative repeaters that eliminate noise accumulation

MegaLink Channel Service

- Uses MegaLink Service as the 1.544 Mbps transport medium for multiple digital and voice grade lines
- Channelized service simply means that multiple circuits are combined onto a single DS1 channel
- Packages for MegaLink Channel Service start with a minimum capacity of 24 intraLATA lines
- Provides channels between a customer's premises and serving wire center
- Provides for customers with multiple locations to communicate with main location

Features and Uses

Feature	Use
1.544 Mbps transmission	Links with Digital ESSX® service, PBXs, off-premises extensions (OPXs), tie lines and data interoffice connections
1.544 Mbps transmission	Reduces transmission and response time compared to analog transmission; increases productivity

Feature	Use
Digital voice and data	Offers teleconferencing capability and multiple data/voice applications
Twenty-four or more dedicated line capacity	Provides cost-effective connections compared to separate lines
Low error rate	Provides reliable end-to-end data transport due to low cumulative noise
Expandability	Reduces waiting period for new facilities; low cost of additional circuits; activation fee and tariff charges
Analog concentrators	Reduces off-premises extension (OPX) costs; concentrators reduce the number of lines required by converting many individual lines to tie lines
B8ZS	Clear channel capability
ESF	Extended Super Frame

Technical Parameters

Feature	Parameter
1.544 Mbps transmission	T1 rate multiplexers may be needed; a customer purchases one data multiplexer for each MegaLink service channel termination to convert signal to DS1 level.
24-channel capacity	The number of channels is dependent upon the type and parameters of customer equipment.

Potential Customers

MegaLink Service/High Capacity DS1 Service

- Large customers with greater than 12 voice grade circuits between two points
- Customers with high speed data transport requirements
- Customers with a need for highly accurate data transmission (financial institutions, large accounting firms, etc.)
- Interexchange Carriers (High Capacity DS1)

MegaLink® Channel Service

- Customers with several locations served by one central office and a need to transport communications to a common remote (main) site (C.O. Based Service)

Potential Customers - MegaLink Channel Service (con't.)

- Customers with multiple subrate digital and voice grade lines and a need to combine those circuits over one channel for cost effectiveness (Premises Based Service)

Tariff Information

MegaLink service is found in Section B7.1 of the state private line tariffs. MegaLink Channel Service is found in Section B7.3 of the state private line tariff.

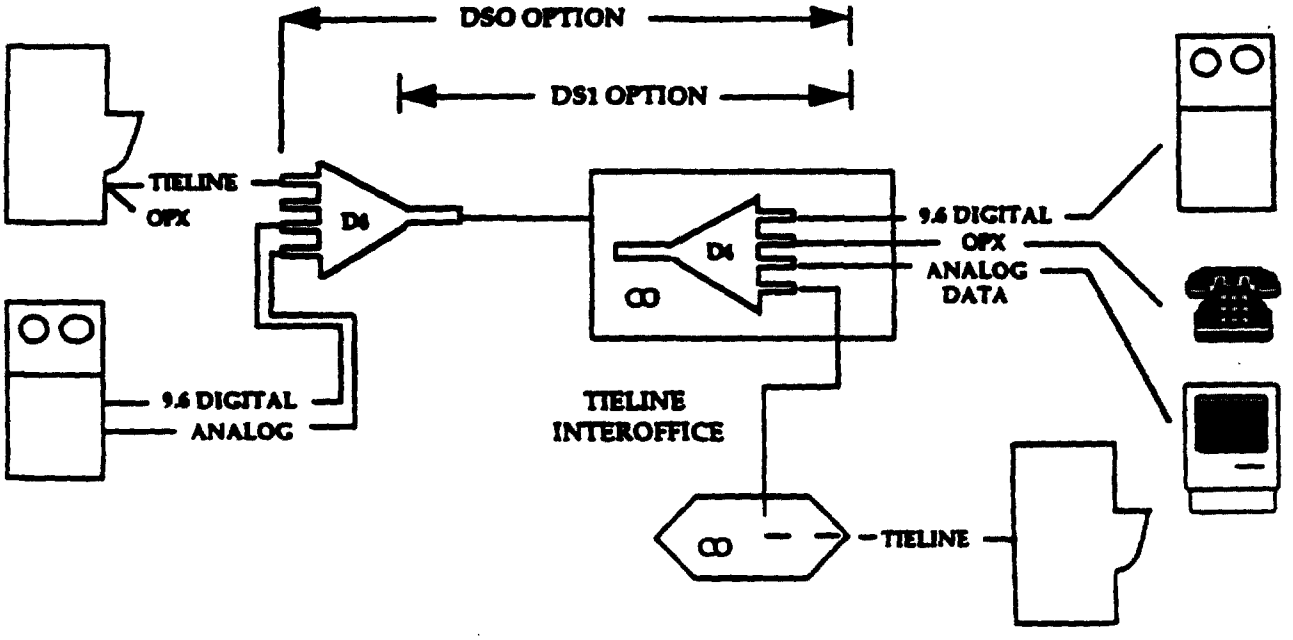
Application

The following application example is taken directly from the Student Guide for the Wideband Services Workshop. The transmission between D4s is via MegaLink service and the channelization is provided via MegaLink Channel Service (MLCS).

MLCS gives the customer the option of receiving the transmission at his premises at a DS1 rate or at the voice grade equivalent rates. Exchange network access, OPXs, tie lines and data services at 2.4, 4.8, 9.6, 19.2, 56 and 64 Kbps are available on MLCS.

On the customer premises, the voice grade circuits are multiplexed to the DS1 rate with customer provided equipment for transmission through the serving central office to the distant central office. At the distant central office, the DS1 signal is demultiplexed (or channelized) into 24 voice grade circuits. If the central office performing the channelization is a DMS-100 or a #5ESS with a digital interface, the channelization will be done internally to the central office (rather than at a channel bank).

All of the voice grade channels may terminate at the same customer premises or may go to different locations.



RESOURCES

Advertising Brochures

BellSouth ... Your Doorway to the Future in Banking*	(BSSM 9428/PIN 922940986)
Make Every Move Count	(BSSM 9408F/PIN 405942137)
MegaLink Channel Services	(BSSM 9406/PIN 639940816)
MegaLink ISDN	(BSSM 9254/PIN 038923389)
The Heart of Healing Though Advanced Telecomm.*	(BSSM 9426/PIN 921940987)

* service mentioned

AIM Bulletins

#12	12/15/91	#70	1/11/93	#102	5/3/93	#160	4/25/94
#17	3/1/92	#73	1/11/93	#103	5/3/93	#165	5/23/94
#27	5/18/92	#75	1/25/93	#108	5/31/93	#195	12/31/94
#29	5/18/92	#79	2/8/93	#112	6/14/93	#197	12/31/94
#35	6/15/92	#80	2/8/93	#115	6/28/93	#207	3/27/95
#38	6/30/92	#82	2/22/93	#120	8/9/93	#210	4/10/95
#40	7/15/92	#84	2/22/93	#123	8/23/93	#214	5/22/95
#43	7/31/92	#88	3/8/93	#128	9/20/93		
#45	8/15/92	#89	3/8/93	#129	9/20/93		
#52	9/15/92	#91	3/22/93	#131	10/25/93		
#61	10/30/92	#92	3/22/93	#132	10/25/93		
#62	10/30/92	#93	4/5/93	#137	11/29/93		
#63	10/30/92	#96	4/5/93	#138	12/8/93		
#64	11/23/92	#97	4/5/93	#154	3/14/94		
#68	12/7/92	#100	5/3/93	#159	4/25/94		

BellSouth at INFORUM Solutions

May 1991
July 1992
October 1992
November 1992
January 1993
May 1993

Communique' Bulletins

#74	3/1/93	#117	11/8/93
#78	3/29/93	#125	2/21/94
#106	9/27/93	#168	12/15/94
#112	10/11/93		

Customer Education

Cover Sheet (order form explanation)	Available from Customer Education

Documentation

Data Competitive Reference Guide	(TS041)
Wideband Services Handbook	(TS013)

Training

BellSouth Data Services and Componentns	(DC102)
Digital Products and Services Management Overview	(CN204A)

MEGALINK® ISDN SERVICE

General Description

MegaLink® ISDN utilizes the ISDN Primary Rate Interface (PRI) and is designed to provide ISDN services for PBX, video conferencing, host computer, enhanced voice and LAN access applications. The Primary Rate Interface is electrically and physically identified to T1 service and provides the customer with 1.536 Mbps of bandwidth. The fundamental channel structure provides 23 - 64 Kbps bearer channels and one 64 Kbps delta channel for signaling and control (23B+D). The service is tariffed in all nine BellSouth states.

Service Description

Integrated Services Digital Network (ISDN) is a Network Architecture which provides end-to-end digital connectivity, out-of-band signalling and integrated access to both voice and data services. The service is currently available from certain 5ESS and DMS-100 central office switches with availability from EWSD switches planned for 1995.

The service provides basic capabilities such as Call-by-Call (CBC), Calling Line Identification (CLID) and Station Identification (SID).

The CBC capability allows the integration of multiple call types (e.g., inward local, outward local, combination or 2-way INWATS and OUTWATS) for either voice or data bearer capabilities onto a single transmission facility (trunk group). This integration is accomplished by breaking what is traditionally known as a "trunk" into two parts: the transmission facility and the network access facility. The transmission facility is provided by the MegaLink ISDN B-channels which are usually provisioned as a single trunk group. Network access facilities are provisioned for each call type (e.g., inward local, outward local, etc.) handled over the PRI. For each call type, the network access facility specifies the maximum number of simultaneous calls for that call type. For example, for a single PRI DS-1 facility with 23 B-channels activiated, a customer might subscribe to three call types: inward local, outward local and INWATS. In this case, there would be three network access facilities created. The network access facility (NAF) for inward local calls might specify a maximum of 10 simultaneous inward local calls, the NAF for outward local calls might specify a maximum of nine simultaneous outward local calls and the NAF for INWATS calls might specify a maximum of seven simultaneous INWATS calls. In this example, the total of the NAF sizes is 26 (10+9+7 = 26) which is greater than the number of transmission facilities provided (23 B-channels).

This is the typical case encountered when more than one call type is being handled over MegaLink ISDN service. This characteristic allows the customer to subscribe to only the number of transmission facilities needed to carry the total predicted traffic load and allows the B-channels to operate at a relatively high efficiency of use.

The Calling Line Identification (CLID) feature of MegaLink ISDN allows for the transmission of CLID (the telephone number of the originating party) over the MegaLink ISDN D-channel. Since the CLID information is transmitted over the D-channel, separate data facilities are not required. CLID information is typically used by the MegaLink ISDN customer to automate incoming call operations (e.g., screen pop-up functions) or for security applications (e.g., reduction in harassing or obscene calls, elimination of auto-call back equipment on computers, etc.)

The Station Identification (SID) feature allows the PBX or other CPE to transmit the telephone number of the originating station on calls which originate in the CPE. The SID (aka., CPN) is used in the BellSouth network for billing purposes and is also transmitted through the network for possible delivery to the

terminating subscriber as CLID. The SID feature is of interest to customers because of its potential for the reduction of toll fraud, etc.

Customer Profile

- Need to integrate voice and data or multiple voice call types
- Computer Workstations
- Need to automate incoming call operations (Screen Pop-ups)
- Need to improve security with CLID
- Need to share records, retrieve data or transfer files
- Community of Interest-oriented
- Network Management
- Host, ESSX service interface

Customer Applications

- Call-by-call for trunking efficiencies
- CLID for security improvements
- Video Conferencing
- Asynchronous Host Access
- Enhanced Voice
- Remote Access to LANs
- Telecommuting
- High Quality Audio

Tariff Information

MegaLink ISDN services appear in the General Subscriber Service Tariff B7.5

TAB 54

MegaLink® Service
CLEC Information Package

This information is provided solely as a convenient reference for BellSouth's Customers. While BellSouth believes information contained herein to be consistent with applicable Tariffs, the Tariffs shall prevail in any instance in which inconsistency may exist.

Service Description

MegaLink Service allows the customer the capability to transmit data at the DS1 level. MegaLink utilizes 1.544 Mbps facilities for its delivery on a link basis or as an end-to-end service. MegaLink service uses digital carrier technology (T1) to transmit DS1 signals to and from customer's premises. MegaLink is suited for customers with needs for multiple Private Line DS0 level circuits. A potential MegaLink customer will need to transfer large volumes of voice, data video, or control signals at high speed between at least two locations in the same LATA. The high speed and volume improves the customer's information processing and reduces paper flow.

- MegaLink is designed for medium to large businesses.
- It allows customers to use high-speed, high-volume digital facilities for Private Branch Exchange (PBX) systems, off-premises extensions, tie lines, or interoffice data connections.
- MegaLink fits between voice-grade services and/or DS0 level digital data services and LightGate® service.
- It is a good product for customers who need to replace their multiple voice-grade lines and low speed/high speed digital lines.

MegaLink uses include:

- Control monitoring
- Order entry systems
- Customer billing transfer
- Reservation information and services
- Bulk data processing (Batch)
- Teleconferencing
- Electronic funds transfer
- Voice and data communications
- Electronic mail transfer
- Inventory management

With MegaLink service, there are four possible configurations:

- From the customer's location to the serving central office (link)
- From the customer's location to a distant central office (link)
- From the serving central office to another central office (link)
- From the customer's location to another customer's location

In the first three instances, the partial channel is called a link. MegaLink service may be provided as a link to:

- Another MegaLink Service
- MegaLink Channel Service®
- Multiserv® Service
- FlexServ® Service
- LightGate® Service
- SMARTRing® Service

MegaLink service can be provided through any central office and does not require a node.

MegaLink Service is a digital facility that provides for the two way simultaneous transmission of a bit stream operating at 1.544 Mbps. There are two line coding formats that are currently available for use. The first is an isochronously timed bipolar return to zero bit stream operating at 1.544 Mbps. This means that all timing is carried within the bit stream itself. A newer format, that allows for clear channel services, is known as Bipolar with 8 Zero Substitution (B8ZS). B8ZS is a method to provide a Clear Channel Capability (CCC). This supports transport of a framed DS1 signal with unconstrained payload bits. Maintenance signals are transmitted in-band and in the data link of the ESF format. The line coding must be specified by the CLEC.

MegaLink is a point to point service where the customer provides his own timing. The exception to this is when a Digital Cross Connect Device is utilized. Network timing would then be required.

One of the following framing formats are required to connect to BellSouth equipment:

- Superframed (D4)
- Extended Superframe (ESF)

D4 - Super Frame: Of the 1.544 Mbps DS1 signal, 1.536 Mbps are used for the customer's data and 8 Kbps are used by BellSouth for D4 Superframe framing.

Extended Superframe (ESF): Of the 1.544 Mbps DS1 signal, 1.536 Mbps are used for customer data, 4 Kbps are used for BellSouth framing and 4 Kbps are used for customer performance monitoring.

The framing format must be specified by the CLEC. The same framing format shall be used in both directions of transmission.

Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems may be connected at the premises of the customer to MegaLink service. The customer may create digital bit streams from a MegaLink service and such equipment may be connected for transmission of such bit streams when connected through a customer-provided Channel Service Unit (CSU) or Terminating Equipment (TE).

Clear Channel Capability (CCC) is an arrangement that alters a DS1 1.544 Mbps signal with unconstrained information bits, to meet pulse density requirements outlined in Technical Reference 73525. This will allow a customer to transport an all zero octet over a MegaLink service channel providing an available combined maximum 1.536 Mbps data rate. This arrangement requires the customer signal at the channel interface to conform to Bipolar with 8 Zero Substitution (B8ZS) line code as described in Technical Reference 73525.

CCC is provided on MegaLink service channels between two customer designated premises, from a customer premises to their Serving Wire Center or Node Central Office and/or to a remote Serving Wire Center or Node Central Office, and from a Central Office to a Central Office, and is subject to the availability of facilities. This optical feature may be ordered at the same time the MegaLink service channel is ordered, or it may be ordered as an additional feature of an existing MegaLink service channel.

A MegaLink service consists of several standard components with most provided by BellSouth.

Components provided by BellSouth:

- Digital local channel
- Interoffice channel (where applicable)

A digital local channel is the connection between the customer's location and the serving central office. The element is charged differently based on the state where the service is provisioned: i.e., either in ½ mile increments - "First" and "Each Additional" or on a flat rate basis.

Interoffice channels are the connection between central offices. The rates are based on airline miles. Two sets of USOCs are associated with the digital interoffice channel;

- Fixed rates
- Per Mile Mileage rates

The customer must specify Line coding and Frame Format.

Provided at the Customer Location by the customer:

- Channel Service Unit (CSU)

A network interface is required at the customer's premises to interface the MegaLink local channel with the customer's Network Channel Terminating Equipment (NCTE). Since the NCTE and the CSU are considered customer premises equipment it is critical that the CLEC identify the location of the customer's network interface. This information can impact the location of the last repeater in the circuit. Also, the location of the network interface is dictated by the minimum point of penetration rules.

Signaling is very important. AMI/B8ZS and ESF/SF are areas where most troubles occur on installation.

MegaLink service can be provided in the four following pricing arrangements:

- Month-to-Month
- 24-48 month contract plan
- 49-72 month contract plan
- 73-96 month contract plan

The rates provided under contract plans are not subject to increase by BellSouth until the contract period expires. There is, however, a termination liability if the service is terminated or disconnected prior to the end of the contract.

Service ordering connection charges apply to new service as well as changes, additions and moves of equipment. The initial service establishment charge includes engineering design, common centralized testing and coordination, and establishing and processing specific data in connection with a customer's request.

Premises visit charges also apply for each customer (digital local channel) premises location.

Tariff References/Price List References

MegaLink service is available for intraLATA service in all BellSouth service areas. The MegaLink service tariff is located in section B7 of the state-specific Private Line Service Tariff.

Installation Intervals

Normal Installation Intervals	**NO**
Project Coordination Required	**YES**

Service Inquiry and Ordering Guidelines

To order MegaLink service the CLEC should submit the following forms to the CLEC Account Team:

Local Service Request (LSR)
End User Information Form

Both forms are available in the Resale Ordering Guide.

MegaLink service requests will always require the use of a service inquiry for any given customer and BellSouth location(s). The service inquiry is used to determine:

- Availability of facilities
- Extraordinary costs, if any
- Service intervals

If the customer is changing the line coding or framing format on existing service, a service order will be required. In order to facilitate the process, it is critical to provide all the details of the design when submitting the order, including a diagram of the network.

For all initial or subsequent order activity on MegaLink service, contact your BellSouth CLEC Account Team.

TAB 55

MemoryCall® Service CLEC Information Package

MemoryCall® Service